

Title (en)
STOPPER OF ANALYSIS TEST TUBES

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Application
EP 90200709 A 19900326

Priority
IT 2006789 A 19890407

Abstract (en)
[origin: EP0391461A2] The stopper (1) has the shape of a small bowl and is provided with a protruding upper circular collar (11); said stopper slidably enters into and seals the neck of a test tube (3) until said collar rests against the mouth of said test tube; the horizontal bottom wall (12) of said stopper is constituted by two or more elastically yielding sectors (13) which can bend under the action of a device (43) introduced into said test tube through said bottom wall to introduce into or withdraw from it liquid, and which then return to their initial position as soon as said device has been extracted from said test tube through said bottom wall. In a preferred embodiment a stopper (2A,2B) preferably of the traditional type sealingly closes the cavity (14) of said first stopper (1) to ensure sealing the vacuum previously provided in the test tube and may then be removed when it is necessary to withdraw blood from the test tube.

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Citation (search report)
• [A] US 4295572 A 19811020 - PERCARPIO EDWARD P
• [A] US 4582207 A 19860415 - HOWARD DAVID S [US], et al
• [A] DE 3733696 C1 19890316 - HENKEL KGAA
• [A] US 3930413 A 19760106 - LAIRD RICHARD P, et al
• [A] DE 2623511 A1 19770224 - CORDIS CORP
• [A] US 4362698 A 19821207 - BOOSALIS NICHOLAS T, et al

Cited by
PL424075A1; CN106179551A; US5433716A; EP1840553A1; EP1325875A3; DE4402690A1; US5755701A; WO2018161621A1; WO9419452A1

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